

CLAIMS

The invention claimed is:

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1. An automatic portion control system, comprising:

- (a) a dispensing mechanism adapted for dispensing a first substance into a container;
- (b) a scale adapted for weighing said container; and
- 10 (c) control circuitry adapted for reading a container weight from said scale and controlling said dispensing mechanism accordingly.

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2. The automatic portion control system of claim 1, wherein said container holds an undetermined volume of a second substance.

3. The automatic portion control system of claim 1, wherein said scale includes strain gauge load cells.

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4. The automatic portion control system of claim 3, wherein said control circuitry comprises a strain gauge amplifier portion and an A/D converter portion adapted for converting a voltage differential caused by a deflection of said strain gauge load cell into usable digital data.

5. The automatic portion control system of claim 1, wherein said control circuitry comprises a microprocessor adapted for reading a container weight from said scale and controlling said dispensing mechanism accordingly.
- 5 6. The automatic portion control system of claim 5, further comprising controls for programming said microprocessor.
7. The automatic portion control system of claim 6, wherein said controls for programming said microprocessor are adapted for programming a fill
10 sequence.
8. The automatic portion control system of claim 1, further comprising a tare control.
- 15 9. The automatic portion control system of claim 1, further comprising a proximity sensor adapted for sensing the presence of a container.
10. The automatic portion control system of claim 9, further comprising a container size sensor adapted for detecting two or more container
20 types, each of said container types having a predetermined volume, wherein said control circuitry comprises a microprocessor adapted for reading a container weight from said scale and controlling said dispensing mechanism according to a

detected container type, its known empty weight and volume, and its present weight.

11. A method for dispensing a product into a container, comprising the
5 steps of:

- (a) weighing a container; and
- (b) dispensing the product into the container until reaching the estimated filled weight of the container.

12. The method for dispensing a product into a container, wherein said
10 container contains an undetermined amount of a substance with a specific volume that is substantially different from that of the product, and wherein said step dispensing the product into the container until reaching the estimated filled weight of the container includes the steps of:

- 15 (a) subtracting the known empty weight from the current weight to determine the volume of a known substance in the container; and
- (b) subtracting the volume of the substance in the container with the known volume of an empty container to determine the volume of product to dispense into the container.

20 13. The method for dispensing a product in a container of claim 11, further comprising the step of detecting the presence of a container.

14. The method for dispensing a product in a container of claim 12, further comprising the step of detecting the type of container to determine the known empty weight and the known volume of an empty container.

5 15. The method for dispensing a product in a container of claim 11, further comprising the step of performing a pre-programmed fill sequence.